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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/626,960

07/24/2003

Clifford L. Winings

FCI-2656/C3138

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23377

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09/22/2004

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EXAMINER

LUEBKE, RENEE S

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/626,960

Applicant(s)

WININGS ET AL.

Examiner

Renee S. Luebke

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2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-8,11,22,23,25-31 and 33-45 is/are rejected.
- 7) ☒ Claim(s) 5,9,10,12-21,24 and 32 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 07 May 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/8/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

1. The drawings are objected to because:

- In Fig. 2, it appears that "22e" should be -22d-.
- In Fig. 6C, it appears that flexible region 20i should be indicated with lines showing its extent.
- In Fig. 9, it appears that "50b" should be -50e- and that the lead line for 50f is incorrect.
- Are the board 50 and contact 63 properly shown in perspective in Fig. 9?

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The disclosure is objected to because of the following informalities:

- a. On line 2 of paragraph 56, it appears that the reference should be to -Figures 2 and 4- since the portions discussed are not shown in Fig. 1.
- b. Contrary to paragraph 59 and 70, the signal traces 28 and 58 do not extend to the edges of the board. As shown in the figures and discussed in other paragraphs, they lead to various signal pads (which may or may not extend to the edges).
- c. Reference numeral 42 (paragraph 61) is not found in the figures.
- d. Contrary to the description, the contacts 32 are not seen to be "fingers" which suggests a free end.
- e. Contrary to the last sentence of paragraph 72, the second signal pads appear along edge 50c, not "proximate the forward edge 50d."
- f. The description of contact portion 66c as "angled" is confusing. As seen in fig. 9, this portion appears to be flat and coplanar with adjacent portion 66b.
- g. On line 1 of paragraph 76, it appears that "are" should be deleted.
- h. On line 7 of paragraph 78, it appears that "contact portion 66e" should be changed to -beam portion 66d- since it is the beam portion that determines the spring force of the contact.
- i. The last sentence of paragraph 78 appears to contain typographic error(s).

Appropriate corrections are required.

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is

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requested in correcting any other errors of which applicant may become aware in the specification.

4. Claims 24 and 39 are objected to because of the following informalities:

- Claim 24 contradicts claim 23 from which it depends. How can the plate be both mounted on and spaced from the circuit board?
- On line 2 of claim 39, "fist" should apparently be changed to -first-.

Appropriate corrections are required.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 4, 6-8, 25-31, 33-39, 42, 43 and 45 are rejected under 35 U.S.C. 102(e) as being anticipated by Hasircoglu, et al. This connector comprises a plug 100 comprising a circuit board 110, a contact finger 190, a housing 120, 610, a portion 117 of the board extending from the housing, a flexible portion 112, a receptacle 200, a contact 22, and a housing 220, 710 having a slot 732. In regard to claims 4 and 43, the plug comprises a first 622

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and second lip 624. In regard to claim 6, the plug comprises a tuning fork type contact 106 that engages an electrical component 102. In regard to claims 7 and 8, the receptacle comprises a tuning fork type contact 206 that engages an electrical component 202 and the circuit board in the receptacle. In regard to claims 25 and 26, the plug comprises a plurality of circuit boards and plates 622. In regard to claims 35 and 38, the forward portion of the printed circuit board is "substantially contoured" to fit the housing by being stepped.

8. Claims 11, 40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasircoglu. The connector of Hasircoglu comprises wafers, but does not show the connections between the contacts at the edges. As is well known, wafers of this type usually comprise conductive traces to perform this function. This allows efficient, space-conserving use of the wafers. For this reason, it would have been obvious to use conductive traces on the wafers of Hasircoglu. In regard to claim 41, the use of a rib on an insertable web, for insertion in a slot of the housing, is well known. Such a structure allows a smaller slot in the housing thereby leaving a stronger housing wall. For this reason, it would have been obvious to use a rib on the circuit board and a slot on the housing of Hasircoglu.

9. Claims 2, 3, 22, 23 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasircoglu in view of Paagman. The similar connector of Paagman comprises contacts with elongated sections 42 and a contact portion 43 extending substantially perpendicular thereto. This wide contact portion allows easy and accurate connection to contact fingers that may not be perfectly aligned. For the same reason, it would have been obvious to use a contact of this shape on the connector of Hasircoglu.

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In regard to claims 22 and 23, Paagman further comprises a ground plane 38 (shaped as a plate) on a second side of the circuit board for protection of the device. For the same reason, it would have been obvious to include a ground plane on the connector of Hasircoglu.

10. Claims 5, 9, 10, 12-21 and 32 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

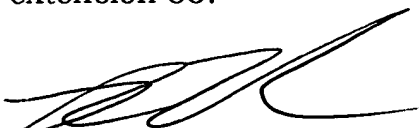
11. Any response to this action may be mailed to:
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to:
(703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12. Any inquiry concerning this communication from the examiner should be directed to Mrs. Renee Luebke whose telephone number is (571) 272-2009.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mrs. Paula Bradley, can be reached at (571) 272-2800, extension 33.



Renee S. Luebke
Primary Patent Examiner
September 20, 2004